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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/509,441 | 04/22/2005 | Benjamin N Peace | 17638-004US1 | 7469 |

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MINNEAPOLIS, MN 55440-1022

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| EXAMINER |
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LAIOS, MARIA J

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| ART UNIT | PAPER NUMBER |
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1795

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| MAIL DATE | DELIVERY MODE |
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02/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/509,441 | | PEACE ET AL. | |
| | Examiner | | Art Unit | |
| | Maria J. Laios | | 1795 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 7-11 and 13-16 is/are allowed.
- 6) ☒ Claim(s) 5, 6, 12, 17, 18, 20 and 21 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to the amendment filed on 9 November 2007. Claims 1, 5-8, 10, 16 and 17 have been amended. Claims 2-4 and 23-24 have been cancelled. Claims 1 and 5-21 are pending. Claims 5, 6, 12, 17, 18, 20, and 21 are finally rejected for the reasons below.

Specification

2. The disclosure is objected to because of the following informalities: Misspelling of There is on page 2 line 15.

Appropriate correction is required.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: In claim 8, the limitation recited as, "wherein each of the teeth has a profile allowing disengagement of the top member in a direction parallel to axes of the teeth".

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 5, 6 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 5 is indefinite because claim 1 recites a top member and an engagement member and it is unclear whether applicant is referring to the same members in claim 5 or different members.

7. The term "substantial" in claim 6 is a relative term which renders the claim indefinite. The term "substantial" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

8. Claim 12 is indefinite because it is unclear if the recited sidewall is the same one applicant refers to in claim 1.

Claim Rejections - 35 USC § 102

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 20-21 rejected under 35 U.S.C. 102(b) as being anticipated by Bisaka et al. (US 2002/0034673 A1).

With regard to claims 20 and 21 Bisaka et al discloses the method of forming a fuel cell stack comprising receiving a plurality of fuel cell plates (23) into a confinement volume of a carriage unit cradle (24,22B) the fuel cell plates (23) forming a stack (Figure 7), applying a carriage unit closure member (22A) to compress the fuel cell plates in a first direction (Figure 7, tightening force) orthogonal to a plane of the fuel cell plates and to engage the closure member with the

carriage unit cradle and automatically locking the closure member and the cradle when the closure member reach is a predefined degree of compression of the fuel cell plates and the tightening force (Figure 7) passing through a series of successive automatic locking engagement positions (29) between the closure member and the cradle until an appropriate degree of compression is reached (Abstract).

Claim Rejections - 35 USC § 103

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claims 17 and 18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bisaka et al. (US 2002/0034673 A1).

With regard to claim 17, Bisaka et al. discloses a fuel cell compression assembly comprising a carriage unit cradle (24,22B) for receiving a stack of fuel cell plates (23) that overlap and a closure member (22a). The cradle is capable of receiving fuel cell plates (figure 7); the closure member (22A) will mate and lock once pressure is applied to the engagement (29).

With regard to claim 18, Bisaka et al discloses bolts (25) will inhibit the movement of the closure member (22A).

Allowable Subject Matter

13. Claims 1 and 7-11, 13-16 are allowed.

14. Claim 19 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. Claims 5, 6 and 12 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

16. The closest prior art of record, Bisaka et al., does not teach or suggest, the distinguishing features of the teeth as having an asymmetric profile allowing passage of the top member in one direction or interlocking teeth that provide a plurality of automatic locking portion at varying distances along the first direction.

Response to Arguments

17. Applicant's arguments filed 09 November 2007 have been fully considered but they are not persuasive.

Applicant argues:

*The Bisaka reference does not disclose "The closure member adapted to close a carriage unit and to apply pressure to the fuel cell plates via **automatic locking engagement** with the carriage cradle unit when the closure member is brought into position with the carriage unit."*

The examiner respectfully disagrees. Bisaka discloses a carriage unit cradle consisting of part 24 and 22B and a closure member (22a). The closure member closes the cradle as depicted in Figure 7. Also from Figure 7 the tightening force is applied in the direction of the closure member. Bisaka also disclose in paragraph 67, the teeth of the serration 29 prevent the slippage

therefore this would indicate automatic locking engagement once the closure member 22b is brought into position with the carriage unit.

Applicant argues:

Claim 17 is not a product by process claim.

The Examiner misspoke that claim 17 is a product by process claim. However the rejection that was made still recites all the claimed limitations including the automatic locking engagement as discussed above.

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria J. Laios whose telephone number is 571-272-9808. The examiner can normally be reached on Monday - Thursday 9:30 - 6:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJL



SUSY TSANG-FOSTER
SUPERVISORY PATENT EXAMINER